IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant:

Benjamin Cuenot

Appln. No.:

10/583,228

Filed:

February 28, 2007

For:

ALL-OPTICAL INTENSITY TO DPSK CONVERTER

Confirmation No.:

8258

Group Art Unit:

2613

Examiner:

Nathan M. Curs

Attorney Docket No.:

38307.7

Attorney:

Gerald E. Helget

Additional Fees:

Charge to Deposit Account 023732

Commissioner for Patents

P.O. Box 1450

Alexandria, VA 22313-1450

CERTIFICATE OF ELECTRONIC TRANSMISSION

I hereby certify that this document is being transmitted to the U.S. Patent and Trademark Office via EFS Web online filing to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on the date indicated below.

REQUEST FOR CORRECTED NOTICE OF ALLOWANCE

Dear Sir/Madam:

On February 5, 2010 a Notice of Allowance and Fees Due was issued for the abovereferenced patent application. We note that the title of the invention printed on the Notice of Allowance is incorrect.

In the Office Action dated August 26, 2009 the examiner required that the title of the invention be amended to become "clearly indicative of the invention to which the claims are directed."

The Amendment and Response filed on December 28, 2009 included a marked-up Specification which clearly showed the title had been amended to "ALL-OPTICAL INTENSITY TO DPSK CONVERTER. A clean copy of the Specification was also provided. The title printed on the Notice of Allowance is the original title and not the amended title.

We request a corrected Notice of Allowance be issued with the amended title ALL-OPTICAL INTENSITY TO DPSK CONVERTER. Copies of the pertinent pages of the August 26, 2009 Office Action and December 28, 2009 Amendment and Response as well as the February 5, 2010 Notice of Allowance are attached.

Respectfully submitted,

Dated: 26 KB 10

Gerald E. Helget (Reg. No. 30,948)

BRIGGS AND MORGAN, P.A.

2200 IDS Center

80 South Eighth Street

Minneapolis, Minnesota 55402-2157

Telephone: 612-977-8480 Facsimile: 612-977-8650

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	Application No.	Applicant(s)		
	10/583,228	CUENOT ET AL.		
Office Action Summary	Examiner	Art Unit		
	NATHAN M. CURS	2613		
The MAILING DATE of this communication app Period for Reply	ears on the cover sheet w	vith the correspondence address		
A SHORTENED STATUTORY PERIOD FOR REPLY WHICHEVER IS LONGER, FROM THE MAILING D/ - Extensions of time may be available under the provisions of 37 CFR 1.1: after SIX (6) MONTHS from the mailing date of this communication. - If NO period for reply is specified above, the maximum statutory period v - Failure to reply within the set or extended period for reply will, by statute Any reply received by the Office later than three months after the mailing earned patent term adjustment. See 37 CFR 1.704(b).	ATE OF THIS COMMUNI 36(a). In no event, however, may a vill apply and will expire SIX (6) MOI , cause the application to become A	ICATION. reply be timely filed NTHS from the mailing date of this communication. BANDONED (35 U.S.C. § 133).		
Status				
1) Responsive to communication(s) filed on 28 Fe	ebruary 2007.			
,	action is non-final.			
3) Since this application is in condition for allowar		-		
closed in accordance with the practice under E	x parte Quayle, 1935 C.	D. 11, 453 O.G. 213.		
Disposition of Claims				
4) Claim(s) <u>1-12</u> is/are pending in the application.				
4a) Of the above claim(s) is/are withdraw	vn from consideration.			
5) Claim(s) is/are allowed.				
6)⊠ Claim(s) <u>3,11 and 12</u> is/are rejected.				
7) Claim(s) <u>1,2, 4-10</u> is/are objected to.				
8) Claim(s) are subject to restriction and/or	r election requirement.			
Application Papers				
9) The specification is objected to by the Examine	r .			
10)⊠ The drawing(s) filed on <u>28 February 2007</u> is/are		objected to by the Examiner.		
Applicant may not request that any objection to the				
Replacement drawing sheet(s) including the correcti				
11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.				
Priority under 35 U.S.C. § 119				
12) ☐ Acknowledgment is made of a claim for foreign a) ☐ All b) ☐ Some * c) ☐ None of:	priority under 35 U.S.C. §	§ 119(a)-(d) or (f).		
1. Certified copies of the priority documents have been received.				
Certified copies of the priority documents have been received in Application No				
3. Copies of the certified copies of the priority documents have been received in this National Stage				
application from the International Bureau (PCT Rule 17.2(a)).				
* See the attached detailed Office action for a list of the certified copies not received.				
	of the certified copies not	received.		
	of the certified copies not	received.		
Attachment(s)	of the certified copies not	received.		
Attachment(s) 1) Notice of References Cited (PTO-892) 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)	4) 🔲 Interview S	received. Summary (PTO-413) s)/Mail Date		

Application/Control Number: 10/583,228

Art Unit: 2613

DETAILED ACTION

Drawings

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: 12. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filling date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

- 2. The abstract of the disclosure is objected to because it is not a single paragraph. Correction is required. See MPEP § 608.01(b).
- 3. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

The following title is suggested: All-Optical Intensity to DPSK Converter.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

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Benjamin Cuenot et al.

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Nathan M. Curs

Attorney Docket No.: 38307.7

Attorney:

Gerald E. Helget

Additional Fees:

Charge to Deposit Account No. 023732

Mail Stop Amendment Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450

CERTIFICATE OF ELECTRONIC TRANSMISSION

I hereby certify that this document, and the documents listed hereon, are being transmitted to the U.S. Patent and Trademark Office via EFS Web online filing to Mail Stop Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA

TRANSMITTAL COVER LETTER

Dear Sir:

Enclosed for filing, please find the following:

- 1. Amendment and Response
- 2. Substitute Specification
- 3. Marked-Up Specification
- 4. One (1) Replacement Drawing Sheet
- 3. Request for Extension of Time

Dated: Z8 DG O7

Respectfully submitted,

Gerald E. Helget (Reg. No. 201948)

Nelson R. Capes (Reg. No. (37, 106)

BRIGGS AND MORGAN, P.A.

2200 IDS Center, 80 South Eighth Street Minneapolis, Minnesota 55402-2157

Telephone: 612-977-8480

Facsimile: 612-977-8650

MARKED-UP SPECIFICATION

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ALL-OPTICAL CONVERTER ALL-OPTICAL INTENSITY TO DPSK CONVERTER

CROSS-REFERENCE TO RELATED APPLICATION

The present application is a national stage of and claims priority of International Patent Application Serial No. PCT/FR2003/03809, filed December 19, 2003, the content of which is hereby incorporated by reference in its entirety.

BACKGROUND OF THE INVENTION

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10

The invention concerns an all-optical converter for converting an intensity-modulated optical signal into an optical signal modulated to the DPSK format. It finds an application in the field of optical transmissions.

Intensity modulation by On/Off Keying or OOK is known. In this case, a pulse represents a "1" and an absence of pulse represents a "0".

Differential phase shift modulation (Differential Phase Shift Keying or DPSK) is known. In the DPSK format, the information is transported in the phase difference between two adjacent pulses.

Transmission to the DPSK format is advantageous since the sensitivity is better. In addition in optical mode, it is easy to analyse the phase difference between two signals.

There currently exist, in the field of optical transmissions, converters that convert an amplitude-coded binary electrical signal into an optical signal coded to the DPSK format. These converters combine electronic elements and optical elements.

The electronic part of the converter comprises an exclusive-OR (XOR) electronic logic gate. The electronic signal that represents the information arrives modulated in amplitude at the first input of the logic gate. The output of the logic gate is connected to the second input of the logic gate with a delay of one bit time with respect to the first input.

SUBSTITUTE SPECIFICATION

ALL-OPTICAL INTENSITY TO DPSK CONVERTER

CROSS-REFERENCE TO RELATED APPLICATION

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The electronic part of the converter comprises an exclusive-OR (XOR) electronic logic gate. The electronic signal that represents the information arrives modulated in amplitude at the first input of the logic gate. The output of the logic gate is connected to the second input of the logic gate with a delay of one bit time with respect to the first input.

In a particular case, an optical signal serving as a carrier is sent into an optoelectronic modulator, for example of the Mach-Zender type. This modulator is



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE United States Patent and Trademark Office Address: COMMISSIONER FOR PATENTS P.O. Box 1450 Alexandria, Virginia 22313-1450 www.uspto.gov

NOTICE OF ALLOWANCE AND FEE(S) DUE

Briggs and Morgan, P.A.: IP Docketing

7590

02/05/2010

Atty Linitials 1st Linitials 2nd Li

EXAMINER

CURS, NATHAN M

Gerald E. Helget Briggs and Morgan 80 South Eight Street

Suite 2200 Minneapolis, MN 55402 FEB 18 2010

ART UNIT

PAPER NUMBER

-00-4-1

Docket Number 3050 Req'd Action 258 ue Ree

DATE MAILED: 02/05/2010

Initial Deadline

FIRST NAMED INVENTOR

ATTORNEY DOCKET NO.

CONFIRMATION NO.

10/583,228

02/28/2007

Benjamin Cuenot

33135.3

8258

TITLE OF INVENTION: ALL-OPTICAL CONVERTER

38307.7

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	\$1510	\$300	\$0	\$1810	05/05/2010

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED. THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED. SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.

HOW TO REPLY TO THIS NOTICE:

I. Review the SMALL ENTITY status shown above.

If the SMALL ENTITY is shown as YES, verify your current SMALL ENTITY status:

- A. If the status is the same, pay the TOTAL FEE(S) DUE shown above.
- B. If the status above is to be removed, check box 5b on Part B Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and twice the amount of the ISSUE FEE shown above, or

If the SMALL ENTITY is shown as NO:

- A. Pay TOTAL FEE(S) DUE shown above, or
- B. If applicant claimed SMALL ENTITY status before, or is now claiming SMALL ENTITY status, check box 5a on Part B Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and 1/2 the ISSUE FEE shown above.
- II. PART B FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B Fee(s) Transmittal should be completed and an extra copy of the form should be submitted. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.
- III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

IMPORTANT REMINDER: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.

PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), to: Mail

Mail Stop ISSUE FEE
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

or <u>Fax</u> (571)-273-2885

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for

CURRENT CORRESPONDEN		ock 1 for any change of address)	ree	(s) I ransmittal. Thi	s certificate cannot be used	or domestic mailings of the for any other accompanying
			hav	e its own certificate	of mailing or transmission.	ent or formal drawing, must
Gerald E. Helge Briggs and Morga 80 South Eight St Suite 2200	an	/2010	I h Sta add trai	Certereby certify that this tes Postal Service was lressed to the Mail asmitted to the USP	tificate of Mailing or Trans is Fee(s) Transmittal is being ith sufficient postage for fin Stop ISSUE FEE address FO (571) 273-2885, on the o	smission g deposited with the United st class mail in an envelope above, or being facsimile date indicated below.
Minneapolis, MN	55402					(Depositor's name)
						(Signature)
		•	L		***	(Date)
APPLICATION NO.	FILING DATE	FIRST NAMED INVEN		٠,	ATTORNEY DOCKET NO. CONFIRM	
10/583,228	02/28/2007		Benjamin Cuenot	38307.7 8258		8258
TITLE OF INVENTION:	ALL-OPTICAL CON	VERTER				
APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE	FEE TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	\$1510	\$300	\$0	\$1810	05/05/2010
EXAMI	NER	ART UNIT	CLASS-SUBCLASS			
CURS, NAT	THAN M	2613	398-176000	,		
1. Change of corresponden CFR 1.363). Change of corresponden CFR 1.363). Change of correspondences of correspondences form PTO/SB/ "Fee Address" indic PTO/SB/47; Rev 03-02 Number is required. 3. ASSIGNEE NAME AN	ndence address (or Char 122) attached. ation (or "Fee Address' or more recent) attach	nge of Correspondence Indication form ed. Use of a Customer	• •	o 3 registered patent vely, le firm (having as a agent) and the name orneys or agents. If r printed.	member a 2 so of up to no name is 3	
PLEASE NOTE: Unlet recordation as set forth (A) NAME OF ASSIGI	NEE		(B) RESIDENCE: (CITY	and STATE OR C		ocument has been filed for
☐ Issue Fee ☐ A check is enclouded Publication Fee (No small entity discount permitted) ☐ Payment by creating the control of			☐ A check is enclosed. ☐ Payment by credit car	rd. Form PTO-2038	y previously paid issue fee is attached. ge the required fee(s), any de	,
5. Change in Entity Statu			☐ b. Applicant is no lon	ger claiming SMAI	L ENTITY status. See 37 C	FR 1 27(a)(2)
• • •	Publication Fee (if requ	ired) will not be accepted	d from anyone other than t		tered attorney or agent; or the	
Authorized Signature				Date		
	Typed or printed name Registration No					
Alexandria, Vilginia 2231.	J-1430.				e public which is to file (and inutes to complete, includir inments on the amount of the trademark Office, U.S. Dep- SEND TO: Commissioner isplays a valid OMB control	



United States Patent and Trademark Office

UNITED STATES DEPARTMENT OF COMMERCE United States Patent and Trademark Office Address: COMMISSIONER FOR PATENTS P.O. Box 1450 Alexandria, Virginia 22313-1450 www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/583,228 02/28/2007		Benjamin Cuenot	33155.38	8258
759	0 02/05/2010		EXAM	INER
Gerald E. Helget			CURS, NA	THAN M
Briggs and Morgan			ART UNIT	PAPER NUMBER
80 South Eight Stree Suite 2200 Minneapolis, MN 53			2613 DATE MAILED: 02/05/2010	0

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)

(application filed on or after May 29, 2000)

The Patent Term Adjustment to date is 453 day(s). If the issue fee is paid on the date that is three months after the mailing date of this notice and the patent issues on the Tuesday before the date that is 28 weeks (six and a half months) after the mailing date of this notice, the Patent Term Adjustment will be 453 day(s).

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (http://pair.uspto.gov).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

	Application No.	Applicant(s)			
N. 41	10/583,228	CUENOT ET AL.			
Notice of Allowability	Examiner	Art Unit			
	NATHAN M. CURS	2613			
The MAILING DATE of this communication appearance All claims being allowable, PROSECUTION ON THE MERITS IS herewith (or previously mailed), a Notice of Allowance (PTOL-85) NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RI of the Office or upon petition by the applicant. See 37 CFR 1.313	(OR REMAINS) CLOSED in or other appropriate communication is second IGHTS. This application is second control in the communication in the communication in the control in the communication in the c	this application. If not included unication will be mailed in due course. THIS			
1. This communication is responsive to <u>28 December 2009</u> .					
2. The allowed claim(s) is/are <u>1-12</u> .					
3. ☐ Acknowledgment is made of a claim for foreign priority una) ☐ All b) ☐ Some* c) ☐ None of the: 1. ☐ Certified copies of the priority documents have 2. ☐ Certified copies of the priority documents have 3. ☐ Copies of the certified copies of the priority documents have International Bureau (PCT Rule 17.2(a)). * Certified copies not received:	e been received. e been received in Applicatio cuments have been receive	n No d in this national stage application from the			
Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application. THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.					
4. A SUBSTITUTE OATH OR DECLARATION must be subm INFORMAL PATENT APPLICATION (PTO-152) which give					
 5. CORRECTED DRAWINGS (as "replacement sheets") must be submitted. (a) including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached 1) hereto or 2) to Paper No./Mail Date (b) including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d). 					
6. DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.					
Attachment(s) 1. ☐ Notice of References Cited (PTO-892)		formal Patent Application			
2. Notice of Draftperson's Patent Drawing Review (PTO-948)	6. ∐ Interview Si Paper No./	ummary (PTO-413), Mail Date			
Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date	7. 🗌 Examiner's	Amendment/Comment			
Examiner's Comment Regarding Requirement for Deposit of Biological Material		Statement of Reasons for Allowance			
/NATHAN M CURS/ Primary Examiner, Art Unit 2613	C Outo				